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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/674,817 | 11/06/2000 | Horst Loerz | 514413-3849 | 5231 |

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EXAMINER

FOX, DAVID T

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 02/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

89/674,817

Applicant(s)

Loerz et al

Examiner

FOX

Group Art Unit

1638

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ONE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 11/6/00 + 12/18/00
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 24-46 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☐ Claim(s) _____ is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☒ Claim(s) 24-46 are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☒ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

Office Action Summary

Art Unit: 1638

Claims 1-12 and 14-24 were originally presented with the application. Claims 14-24 were renumbered as claims 13-23, respectively, under 37 CFR 1.126. The preliminary amendment of 6 November 2000, instructing cancellation of claims 1-26, has been interpreted as instructing the cancellation of all originally filed claims, namely claims 1-23. Accordingly, new claims 27-49 presented with the amendment of 6 November 2000 have been renumbered as claims 24-46 in accordance with 37 CFR 1.126.

The application should be reviewed for errors. Errors appear, for example, in claims 31 and 43 which lack a period at the end of the claims; in claim 36 which depends upon itself; and in claim 46, line 1, which is missing a comma after "38" (renumbered from "41").

Claims 35-39 and 45-46 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend upon another multiple dependent claim (claims 36 and 45-46), and because a multiple dependent claim should refer to other claims in the alternative only (claims 35-39 and 45-46). See MPEP § 608.01(n). In the interest of compact prosecution, the claims have been treated on the merits for restriction purposes. Such treatment does not relieve Applicants of the responsibility to respond to this objection.

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

Art Unit: 1638

Group I, claim(s) 24-29, 31-32 and 35-46, drawn to an isolated nucleic acid molecule encoding full-length wheat isoamylase, vectors, plant cells and plants transformed therewith, and a method of its use comprising plant transformation in sense orientation to produce the isoamylase protein and modified starch.

Group II, claim(s) 30, drawn to an oligonucleotide of 15 base pairs.

Group III, claim(s) 33, drawn to a vector for inhibiting expression of isoamylase genes by homologous cosuppression.

Group IV, claim(s) 34, drawn to a vector for inhibiting expression of isoamylase genes by antisense RNA.

The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The claims do not constitute an advance over the prior art because James et al (1995, The Plant Cell) teach an isoamylase-encoding nucleic acid which comprises at least 20 contiguous bases of SEQ ID NO:2, i.e. "a part" of SEQ ID NO:2, as recited in claim 1(b). Furthermore, WO96/03513 (MONSANTO) teach a bacterial isoamylase-encoding gene which would contain at least one nucleotide of, i.e. at least "a part of", the nucleotide sequence of SEQ ID NO:2.

Furthermore, the claims are not drawn to a single special technical feature, but are instead drawn to a multitude of nucleic acid sequences which may hybridize to SEQ ID NO:2, or a multitude of oligonucleotides or "parts" thereof of any sequence and length.

Art Unit: 1638

In addition, Group I, drawn to a first product and method of using it, requires a full length gene and methods for producing and recovering protein, not required by any other group. Group II, drawn to a second product, requires oligonucleotides and methods for nucleic acid hybridization, each not required by any other group. Group III, drawn to a third product, requires a sense suppression vector not required by any other group, and methods for identifying gene inhibition not required by Groups I-II. Group IV, drawn to a fourth product, requires an antisense construct not required by any other Group, and methods for identifying gene inhibition not required by Groups I-II.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and fields of search, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Art Unit: 1638

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (703) 308-0280. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached on (703) 306-3218. The fax phone number for this Group is (703) 872-9306. The after final fax phone number is (703) 872-9307.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

February 8, 2002

DAVID T. FOX
PRIMARY EXAMINER
GROUP 180 1638

